

CLAIMS

1. (Previously presented) A method for determining a position of a mobile terminal comprising:
transmitting a paging request to a mobile terminal via a first control channel for packet data services, the paging request indicating a circuit switched service;
switching from the first control channel to a second control channel for circuit-switched services;
receiving a paging response from the mobile terminal via the second control channel;
and
determining the position of the mobile terminal based on the paging response.
2. (Original) The method of claim 1 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.
3. (Original) The method of claim 2 wherein the first control channel is an Enhanced General Packet Radio Service 136 (EGPRS-136) control channel and the second control channel is a digital control channel.
4. (Previously presented) The method of claim 1 further comprising:
transmitting, in response to the paging response, a release message via the second control channel.
5. (Original) The method of claim 1 wherein the paging request is one of a hard page and a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.
6. (Original) The method of claim 1 wherein the determining the position of the mobile terminal based on the paging response comprises:

determining a cell in which the mobile terminal is positioned.

7. (Previously presented) A system for determining a position of a mobile terminal comprising:

a memory that stores instructions; and

a processor configured to:

send a paging request to a mobile terminal via a first control channel for packet data

services, the paging request indicating that the mobile terminal is to switch to a

second control channel for circuit-switched services;

receive a paging response from the mobile terminal via the second control channel;

and

determine the position of the mobile terminal based on the paging response.

8. (Original) The system of claim 7 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

9. (Original) The system of claim 7 wherein the paging request is one of a hard page and a layer 3 page indicating a circuit-switched service.

10. (Original) The system of claim 7 wherein, after receiving a paging response from the mobile terminal via the second control channel, the processor sends a release message to the mobile terminal, the release message indicating that the mobile terminal may switch back to the first control channel.

11. (Original) The system of claim 7 wherein, when determining the position of the mobile terminal based on the paging response, the processor determines a cell sector in which the mobile terminal is located.

12. (Previously Presented) A computer-readable medium having instructions to control a processor to:
- send a paging request to a mobile terminal via a first control channel for packet data services, the paging request indicating that the mobile terminal is to switch to a second control channel for circuit switched services;
 - receive a paging response from the mobile terminal via the second control channel; and
 - determine the position of the mobile terminal based on the paging response.
13. (Original) The computer-readable medium of claim 12 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.
14. (Original) The computer-readable medium of claim 12 wherein the paging request is one of a hard page and a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.
15. (Previously Presented) The computer-readable medium of claim 12 wherein responsive to the paging response from the mobile terminal, the instructions further control the processor to:
- send a release message to the mobile terminal indicating that the mobile terminal may switch back to the first control channel.
16. (Previously Presented) A method for determining a position of a mobile terminal comprising:
- transmitting a paging request to the mobile terminal via a first control channel for packet data services, the paging request indicating a circuit switched service;
 - switching from the first control channel to a second control channel for circuit-switched services;
 - receiving a paging response via the second control channel from the mobile terminal;

transmitting a position request to the mobile terminal;
receiving a position response from the mobile terminal; and
determining the position of the mobile terminal based on the position response.

17. (Original) The method of claim 16 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

18. (Original) The method of claim 16 wherein the paging request is a layer 3 page comprising a teleservice indication or a Wide Open R-Data Transport indication.

19. (Original) The method of claim 16 further comprising:

assigning, in response to receiving the paging response, one of a control channel and a traffic channel, and
wherein the transmitting a position request to the mobile terminal occurs via the assigned channel.

20. (Original) The method of claim 16 further comprising:

transmitting a release message after receiving the position response.

21. (Original) The method of claim 16 wherein the determining the position of the mobile terminal based on the position response comprises:

determining a cell sector in which the mobile terminal is located.

22. (Previously Presented) A system for determining a position of a mobile terminal comprising:

a memory that stores instructions; and

a processor configured to:

send a paging request to the mobile terminal via a first control channel for packet data

services indicating that the mobile terminal is to switch to a second control channel

for circuit-switched services;

receive a paging response from the mobile terminal via the second control channel;

transmit a position request to the mobile terminal;

receive a position response from the mobile terminal; and

determine the position of the mobile terminal based on the position response.

23. (Original) The system of claim 22 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

24. (Original) The system of claim 22 wherein the paging request is a layer 3 page indicating a circuit-switched service.

25. (Previously presented) The system of claim 22 wherein, responsive to the paging response, the processor:

assigns one of a control channel and a traffic channel to the mobile terminal; transmits the position request to the mobile terminal via the assigned channel; and receives the position response via the assigned channel.

26. (Previously presented) The system of claim 22 wherein the processor determines a cell in which the mobile terminal is located.

27. (Previously presented) A computer-readable medium having instructions to control at least one processor to:

transmit a paging request to a mobile terminal via a first control channel for packet data services, the paging request indicating a circuit switched service;
receive a response to the paging request via a second control channel for circuit-switched services;
transmit a position request to the mobile terminal;
receive a position response; and
determine the position of the mobile terminal based on the position response.

28. (Original) The computer-readable medium of claim 27 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

29. (Original) The computer-readable medium of claim 27 wherein the paging request is a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.

30. (Previously presented) The computer-readable medium of claim 27 wherein the processor is configured to:

assign, in response to receiving the paging response, one of a control channel and a traffic channel; and
transmit a position request to the mobile terminal via the assigned channel.

31. (Original) The computer-readable medium of claim 27 wherein the determining the position of the mobile terminal based on the position response comprises:

determining a cell sector in which the mobile terminal is located.

32. (Currently Amended) A method of determining the position of a mobile terminal comprising:

receiving a paging request from a wireless communications network over a first control channel for packet data services, the paging request indicating a circuit switched service;

switching from the first control channel to a second control channel for circuit-switched services; and

transmitting a paging response over the second control channel;

receiving a position request from the wireless communications network over the second control channel; and

transmitting a position response to the wireless communications network.

33. (Currently Amended) The method of claim ~~33~~ 32 further comprising suspending packet data services responsive to the paging request.

34. (Currently Amended) The method of claim ~~33~~ 32 wherein the wireless communications network determines the position of the mobile terminal based on the paging response.

35-36. (Cancelled).

37. (Currently Amended) The method of claim ~~36~~ 32 wherein the wireless communications network determines the position of the mobile terminal based on the position response.

38. (Currently Amended) A mobile terminal comprising:

a transceiver to communicate in a voice mode and a packet data mode; and
a processing unit communicatively connected to the transceiver and configured to:
receive a paging request from the wireless communications network over a first
control channel for packet data services, the paging request indicating a circuit
switched service;
switch to a second control channel for circuit-switched services responsive to the
paging request over the first control channel; and
transmit a paging response to the wireless communications network over the second
control channel;
receive a position request from the wireless communications network over second
control channel; and
transmit a position response to the wireless communications network over second
control channel.

39. (Previously presented) The mobile terminal of claim 38 wherein the processor is configured
to suspend a packet data session responsive to the paging request.

40-41. (Cancelled).

REMARKS

The Examiner rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by the patent to Silver. Applicants respectfully disagree.

Claim 1 recites, "determining the position of the mobile terminal based on the paging response." Thus, a mobile terminal camped on packet-switched control channel switches to a circuit switched control channel to respond to a page request. The position of the mobile terminal is then based on this page response. The Examiner cites column 8, line 24 – column 9, line 4 of Silver to support the rejection. However, this passage does not appear to teach what the Examiner says it does. This passage, and its associated Figure 4, actually discloses that the packet switched network sends a message bearing location information to the circuit switched network gateway upon a request for a call setup. As seen in Figure 4, the location information is exchanged *before* the mobile terminal transmits a page response. According to Silver, this provides the circuit-switched network with an indication of the position of the mobile terminal, thereby avoiding long delays in completing call setup. In short, the location of the mobile terminal is determined between the networks before the mobile terminal is able to respond to the page request, not after the mobile terminal has switched to the circuit-switched control channel. *Silver*, col. 2, ll. 62-67; col. 8, ll. 24 – col. 9, ln. 4; Figure 4.

Therefore, Silver fails to anticipate claim 1 under § 102. Accordingly, Applicants respectfully request the allowance of claim 1, and its dependent claims 2-6.

The Examiner also rejected claims 7, 12, 16, 22, and 27 under 35 U.S.C. § 102(e) as being anticipated by the patent to Silver citing reasons similar to those used to support the rejection to claim 1. However, each of the claims 7, 12, 16, 22, and 27 contain language similar to that of claim 1. Thus, for reasons similar to those stated above, Silver also fails to anticipate any of claims 7, 12, 16, 22, and 27 under § 102. Applicant therefore respectfully requests the allowance of claims 7, 12, 16, 22, and 27, and their respective dependent claims 8-11, 13-15, 17-21, 23-26, and 28-31.

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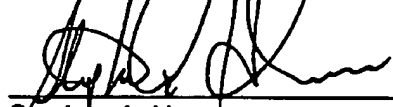
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Finally, Applicants have amended claims 32 and 38 to include the subject matter of their respective dependent claims 35-36 and 40-41, which are now cancelled without prejudice. Additionally, claims 33-34 and 37 have been amended to ensure that the dependencies comport with amended claim 32. No new matter has been added.

As amended, claims 32 and 38 are directed to mobile terminal that, after returning the paging response, transmits its position to the circuit-switched network responsive to a position request. As previously stated, location information in Silver is passed between the networks prior to the page response, not from the mobile terminal over the circuit-switched control channel after the response. Accordingly, Applicants respectfully request the allowance of claim 32, its dependent claims 33-34, and 37, claim 38, and its dependent claim 39.

Respectfully submitted,

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